



Carpinus

Hornbeams are robust, fast-growing trees that provide effective screening through much of the year. By **Kris Collins**

When it comes to formal screening nothing, except perhaps *Taxus baccata* Award of Garden Merit (AGM), is as iconic as beech hedging. Any car journey, short or long, will take you past an example of this popular screening method. But without close inspection are you sure that beech hedge is not actually a hornbeam hedge?

Carpinus betulus AGM, or hornbeam, is similar in appearance to beech (*Fagus sylvatica* AGM), and while some regard it as less visually appealing than beech, the hornbeam often makes a better choice culturally. It will tolerate more soil types and adverse growing conditions than beech, doing well in heavy, wet soils, shade and frost pockets alike. Where a mature look is needed fast, hornbeam will also generally grow quicker.

The name "hornbeam" comes from the hardness of the wood, and indeed the trees are known as ironwood in North America. Trees were coppiced in the past to produce hardwood poles. The native *C. betulus* AGM is found across Europe and parts of Russia, while other forms of the genus extend that range across Asia into China, with *C. japonica* AGM spreading the range further still. In all, there are some 150 species and cultivars, though many are rare and not available in the UK.

Nurseries note that generally only a few standard species and cultivars are called for by

their landscape customers, and suggest that more use should be made of the ornamental, and often smaller, Asiatic forms.

C. betulus AGM is a small to medium-sized deciduous tree that will reach up to 25m, often with a fluted and crooked trunk. Its bark remains smooth and greenish-grey even on old specimens. Hornbeam can be distinguished from beech by its shorter leaf buds and the zig-zagging nature of the stems in between buds, although the most characteristic feature of *Carpinus* is its pendulous seed catkins made up of numerous leafy bracts.

As with beech, hornbeam holds its brown leaves through winter when pruned as a hedge, providing good screening through much of the year. Trees can be coppiced or pollarded while hedges will benefit from late summer pruning to ensure foliage stays on branches through the winter.

Hornbeams produce both male and female catkins in May. Seeds mature towards autumn and provide food for birds while escaping the attention of squirrels, making it a good choice for wildlife planting. A shallow root system also makes it a candidate for street environments.

1. *C. japonica* AGM
2. and 3. *C. betulus* 'Columnaris'
4. *C. betulus* 'Pendula'

WHAT THE SPECIALISTS SAY

Andrew Beale, managing director, Beales Hotels & Arboretum (National Collection Holder), Hertfordshire "We have one collection containing all the *C. betulus* Award of Garden Merit (AGM) cultivars in the main arboretum and have recently duplicated the collection in other parts of the grounds to safeguard the trees' future.

"The one most useful for landscaping and particularly street plantings is *C. betulus* 'Fastigata' AGM. It's an incredibly beautiful tree with up-swept branches, and one of the best trees in the arboretum. It has a delightful leaf and offers good autumn colour. It's native and therefore grows well and survives most conditions. The upswept branches are important from a street point of view as it means cars and lorries can pass underneath safely. It's used an awful lot in street plantings and you often spot it when driving along.

"If you are looking for something a little different from the norm, I would recommend two others – *C. betulus* 'Pendula' and *C. betulus* 'Quercifolia'.

"*C. betulus* 'Pendula' is a beautiful, weeping variety, used more ornamentally for landscaping rather than as a street tree. Our specimens are 20 years old and haven't grown too large but are very attractive with interesting shaped limbs.

"*C. betulus* 'Quercifolia' is more of a novelty but I still recommend using it. It's like a cross between an oak and hornbeam. It has a very indented leaf, looking unlike any other *Carpinus* you will see.

"There is always someone out there looking for something different. *C. betulus* 'Purpurea' adds another element, with a darker leaf.

"With hornbeams native to the British Isles, they all do very well when grown in this country and they won't go wrong."



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Kevin Croucher, managing director, Thornhayes Nursery, Devon "On the whole, the ordinary *C. betulus* AGM is popular for hedging and pleaching, and we sell it ready pleached and as a 40-60cm hedging plant. On top of that, we see a strong market for *C. betulus* 'Fastigiata' AGM for the street scene. We also offer *C. betulus* 'Columnaris', which is genuinely fastigiata unlike 'Fastigiata' AGM, which forms a big, broad conical tree on maturity. 'Columnaris' is slower growing but produces a much more upright tree.

"Sometimes customers ask for beech hedging and depending on their soil type we will recommend hornbeam – it's not quite as good as a beech hedge but will grow and thrive where beech will die or look extremely sick. It's also quicker than beech as a hedge, very versatile and very attractive.

"It can be beautiful as a parkland tree or in a garden – it's not too flamboyant in autumn but does give off a nice colour. The beauty of hornbeam is that it will grow anywhere, including very heavy clay soils, and still turn into an attractive tree with lovely fluted bark.

"The *Carpinus* genus is an under-used and under-regarded group of plants. The unusual Asiatic species aren't that popular but they are pretty trees – you find them in National Trust gardens and botanical collections but because they are not well known they are not heavily used.

"We do propagate *C. fangiiana*, which we see some demand for. It is a spectacular tree, with large leaves and lovely long catkins. We've grown some of the Oriental species like *C. japonica* AGM, *C. coreana* and *C. turczaninowii* AGM from seed but found a limited market for them, which is a real shame."

IN PRACTICE

Joanne Hurst, London projects manager, Trees for Cities "We use several cultivars as street trees, particularly the more fastigate ones, and they are quite commonly requested. *Carpinus* is useful in that it is tolerant of such a wide range of soils and conditions. It copes well with pollution in towns and cities and as people start to think about climate change – wetter winters and hotter, drier summers – hornbeam fares well, either in a street situation or as a native hedge or forest planting.

"*C. betulus* 'Fastigiata' AGM is a fairly common street tree, although it only tends to be fastigate when young, becoming more globular as it matures. There are some very mature street specimens around, showing that it has been a popular choice in the past also. Though they aren't as obvious a choice for street plantings as the London plane, for example, there is definitely a strong place for hornbeam in the street scene.

"We plant young hornbeam whips in a lot of our Capital Woodland sites around London and they do well in both boggy and dry situations. We've also found them to be pretty squirrel-resistant.

"We've recently used the common *C. betulus* AGM in parks in Tower Hamlets and *C. betulus* 'Fastigiata' AGM on Wandsworth road – a very busy A-road through south London. We've used *C. betulus* 'Frans Fontaine' on Bromley High Street and it's even more fastigate than 'Fastigiata' AGM, retaining its columnar habit and staying 3m wide even after 25 years.

"Hornbeam can be mistaken for beech, though hornbeam has a serrated leaf edge, while beech leaves are smooth. The flowers on hornbeam are almost hop-like depending on the species, but are rather different on beech."

SPECIES AND CULTIVARS

- *C. betulus* Award of Garden Merit (AGM) (H4) is globular in form, reaching 25m.
- *C. betulus* 'Columnaris' has an upright columnar to narrow teardrop growth habit through to maturity. It is densely foliated and is a much thinner version of the species.
- *C. betulus* 'Fastigiata' AGM (H4) is the most common form available. It is smaller than the species and takes on a more spreading habit as it matures.
- *C. betulus* 'Frans Fontaine' is a columnar form with a very tight growth habit. A 5m specimen may only have a 45cm width.
- *C. betulus* 'Pendula' is a weeping form.
- *C. betulus* 'Purpurea' is a dark-leaved form.
- *C. betulus* 'Quercifolia' is an unusual form with serrated oak-like leaves.
- *C. cordata*, the heart-leaved hornbeam, is a rare, small tree with heart-shaped, deeply veined, bright green leaves and silvery grey bark.
- *C. coreana*, the Korean hornbeam, is a small-leaved variety. Foliage turns red and yellow striped in autumn and it is often grown as a bonsai.
- *C. fangiiana* is a large-leaved variety that is commonly called the fang hornbeam.
- *C. japonica* AGM (H4) is a small, often multi-stemmed tree. Young foliage is a burgundy colour. It prefers a sheltered site and is suitable for most reasonable soils.
- *C. orientalis* is a small, pyramidal tree with twisted branches.
- *C. tschonoskii* is a less fastigate form with spreading habit.
- *C. turczaninowii* AGM (H4) is an open, rounded form often used in bonsai.